

## **ABSTRACT**

A simple and cost effective method of producing a polymer composite comprising a polymer matrix having metal nanoparticles incorporated therein comprises the steps of (i) mixing metal nanoparticles with a polymer dope; and (ii) solidifying the polymer composite from the dope. Antimicrobial fibres are produced by extruding a dope solution (1) held in a container (2) provided with an inert atmosphere (3) into a coagulating bath (4) containing a coagulant (5), by means of a pump (6) and a spinneret head (7) completely immersed in the coagulant. The dope is filtered via a filter (8) positioned behind the spinneret.